

Figure 1

ATGAAGATTACAAAACCCACATGTGGCCATGTTGCTAGCCCCGGAATGGGCCACA
TCATCCCGGTGATCGAGCTCGGAAAACGCTTAGCTGGTTCCACGGCTTCGATGT
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CACCAGGCTGCGACGCGGCCCTTGTTGATATCGTTGGCCTCCCAACGCCCGATAT
CTCCGGTTTAGTCGACCCATCAGCCTTTTTTGGGATCAAGCTCTTGGTCATGATGC
GTGAGACCATTCCTACCATCCGGTCAAAGATAGAGGAGATGCAACACAAACCAA
CGGCTCTGATCGTAGACTTGTGTTGGTTTGGACGCGATACCGCTCGGTGGTGAGTTC
AACATGTTGACTTATATCTTCATCGCTTCAAACGCACGTTTTCTCGCGGTGGCTTT
GTTTTTCCCAACGTTGGACAAAGACATGGAAGAAGAGCACATAATCAAGAAGCA
ACCTATGGTTATGCCTGGATGTGAACCGGTTCCGTTTGAAGATACACTTGAAACA
TTCTTGACCCAAACAGCCAACTCTACCGGGAATTTGTTCTTTCCGTTCCGTTTT
CCCAACGTGTGATGGTATTATTGTGAATACATGGGATGATATGGAGCCCAAACT
TTGAAATCTCTTCAAGACCCAAAGCTCTTGGGTCTGAATTGCTGGTGTACCGGTTTA
TCCAATTGGTCTTTGTCTAGACCGGTTGATCCATCTAAAATAATCATCCGGTTT
TGGATTGGTTAAACAAACAGCCGGACGAGTCGGTACTTTACATTTCAITTTGGAAG
CGGTGGCTCTCTCTCGGCTAAACAATAACCGAATTGGCTTGGGGACTTGAGATG
AGTCAGCAAACGGTTCGTTTGGGTGGTTCGACCCCGGTGGACGGTTCAGCTTGCA
GTGCATATTIATCCGCTAACAGTGGTAAAATACGAGACGGTACACCTGATTATCT
CCCGGAAGGTTTTGTTAGCCGGACTCATGAGAGAGGCTTTATGGTCTCTTCTTGG
GCTCCCCAAGCGGAGATCTTGGCCACCAAGCCGTAGGTGGGTTTCTAACTCACT
GCGGTTGGAATTCGATTCTCGAGAGCGTCGTTGGTGGCGTTCCGATGATCGCGTG
GCCACTTTTTGCGGAGCAGATGATGAACGCGACACTCCTCAACGAAGAGCTTGGC
GTTGCCGTCCGCTCTAAGAACTACCGTCGGAGGGAGTGATTACGAGGGCGGAG
ATCGAGGCGTTGGTGAGAAAGATCATGGTGGAGGAGGAAGGTGCTGAGATGAGA
AAGAAGATAAAGAAGCTGAAAGAGACCGCTGCCGAATCGCTGAGTTGCGACGGT
GGAGTGGCGCATGAATCGTTGTCAAGAATCGCCGACGAGAGCGAGCATCTTTTGG
AGCGTGTCAGGTGCATGGCACGTGGTGCCTAG

Figure 2

MKTTKPHVAMFASPGMGHIIPVIELGKRLAGSHGFDVTIFVLETDAASAQSQF
LNSPGCDAALVDIVGLPTPDISGLVDPSAFFGIKLLVMMRETIPTIRSKIEEMQH
KPTALIVDLFGLDAIPLGGGFNMLTYIFIASNARFLAVALFFPTLDKDMEEHHI
KKQPMVMGCEPVRFEDTLETFLDPNSQLYREFVPFGSVFPTCDGIIVNTWDD
MEPKTLKSLQDPKLLGRIAGVPVYPIGPLSRPVDPSKTNHPVLDWLNKQPDES
VLYISFGSGGSLSAKQLTELAWGLEMSSQQRVWVVRPPVDGSACSAYLSANS
GKIRDGTPDYLPEGFVSRThERGFMVSSWAPQAEILAHQAVGGFLTHCGWNS
ILES VVGVP MIAWPLFAEQMMNATLLNEELGVAVRSKKLPSEGVITRAEIEA
LVRKIMVEEEGAEMRKKIKKCLKETAESLSCDGGVAHESLSRIADESEHLLER
VRCMARGA

Figure 3

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CCATGTCATC CCGGTGATCG AGCTTGGAAA GCGTCTCTCC GCTAACAACG
GCTTCCACGT CACCGTCTTC GTCCTCGAAA CCGACGCAGC CTCCGCTCAA
TCCAAGTTCC TAAACTCAAC CGGCGTCGAC ATCGTCAAAC TTCCATCGCC
GGACATTTAT GGTFTAGTGG ACCCCGACGA CCATGTAGTG ACCAAGATCG
GAGTCATTAT GCGTGCAGCA GTTCCAGCCC TCCGATCCAA GATCGCTGCC
ATGCATCAAA AGCCAACGGC TCTGATCGTT GACTTGTTTG GCACAGATGC
GTTATGTCTC GCAAAGGAAT TTAACATGTT GAGTTATGTG TTTATCCCTA
CCAACGCACG TTTTCTCGGA GTTTCGATTT ATTATCCAAA TTTGGACAAA
GATATCAAGG AAGAGCACAC AGTGC AAAGA AACCCACTCG CTATACCGGG
GTGTGAACCG GTTAGGTTTCG AAGATACTCT GGATGCATAT CTGGTTCCCG
ACGAACCGGT GTACCGGGAT TTTGTTTCGTC ATGGTCTGGC TTACCCAAAA
GCCGATGGAA TTTTGGTAAA TACATGGGAA GAGATGGAGC CCAAATCATT
GAAGTCCCTT CTAAACCCAA AGCTCTTGGG CCGGGTTGCT CGTGTACCGG
TCTATCCAAT CCGTCCCTTA TGCAGACCGA TACAATCATC CGAAACCGAT
CACCCGGTTT TGGATTGGTT AAACGAACAA CCGAACGAGT CCGTTCTCTA
TATCTCCTTC GGGAGTGGTG GTTGTCTATC GGC GAAACAG TTAAGTGAAT
TGGCGTGGGG ACTCGAGCAG AGCCAGCAAC GGTTCGTATG GGTGGTTTCA
CCACCGGTCG ACGGTTTCGTG TTGTAGCGAG TATGTCTCGG CTAACGGTGG
TGGAACCGAA GACAACACGC CAGAGTATCT ACCGGAAGGG TTCGTGAGTC
GTAAGTAGTA TAGAGGTTTC GTGGTCCCCT CATGGGCCCC ACAAGCTGAA
ATCCTGTCCC ATCGGGCCGT TGGTGGGTTT TTGACCCATT GCGGTTGGAG
CTCGACGTTG GAAAGCGTCG TTGGCGGCGT TCCGATGATC GCATGGCCAC
TTTTTGCCGA GCAGAATATG AATGCGGCGT TGCTCAGCGA CGAACTGGGA
ATCGCAGTCA GATTGGATGA TCCAAAGGAG GATATTTCTA GGTGGAAGAT
TGAGGCGTTG GTGAGGAAGG TTATGACTGA GAAGGAAGGT GAAGCGATGA
GAAGGAAAGT GAAGAAGTTG AGAGACTCGG CGGAGATGTC ACTGAGCATT
GACGGTGGTG GTTTGGCGCA CGAGTCGCTT TGCAGAGTCA CCAAGGAGTG
TCAACGGTTT TTGGAACGTG TCGTGGACTT GTCACGTGGT GCTTAG

Figure 4

MHITKPHAAM FSSPGMGHVI PVIELGKRLS ANNGFHVTVF VLETDAASAO
SKFLNSTGVD IVKLPSPIY GLVDPDDHV TKIGVIMRAA VPALRSKIAA
MHQKPTALIV DLFGTDALCL AKSFNMLSYV FIPTNARFLG VSIYYPNLDK
DIKEEHTVQR NPLAIPGCEP VRFEDTLDAY LVPDEPVYRD FVRHGLAYPK
ADGILVNTWE EMEPKSLKSL INPKLLGRVA RVPVYPIGPL CRPIQSSETD
HPVLDWLNEQ PNESVLYISF GSGGCLSAKQ LTELAWGLEQ SQQRFVWVVR
PPVDGSCCSE YVSANGGGTE DNTPEYLPEG FVSRTSDRGF VVPSWAPQAE
ILSHRAVGCF LTHCGWSSTL ESVVGGVPMI AWPLFAEQNM NAALLSDELG
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DGGGLAHESL CRVTKECQRF LERVVDLSRG A

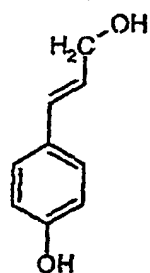
Figure 5

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CCATGTCCTC CCGGTGATCG AGCTAGCTAA GCGTCTCTCC GCTAACCACG
GCTTCCACGT CACCGTCTTC GTCTTGAAA CTGACGCAGC CTCCGTTGAG
TCCAAGCTCC TTAACCTCAAC CGGTGTTGAC ATCGTCAACC TTCCATCGCC
CGACATTTCT GGCTTGCTAG ACCCCAACGC CCATGTGGTG ACCAAGATCG
GAGTCATTAT GCGTGAAGCT GTTCCAACCC TCCGATCCAA GATCGTTGCC
ATGCATCAAA ACCCAACGGC TCTGATCATT GACTTGTGTTG GCACAGATGC
GTTATGTCTT GCAGCGGAGT TAAACATGTT GACTTATGTC TTTATCGCTT
CCAACGCGCG TTATCTCGGA GTTTCGATAT ATTATCCAAC TTTGGACGAA
GTTATCAAAG AAGAGCACAC AGTGCAACGA AAACCGCTCA CTATACCGGG
GTGTGAACCG GTTAGATTTG AAGATATTAT GGATGCATAT CTGGTTCCGG
ACGAACCGGT GTACCACGAT TTGGTTCGTC ACTGTCTGGC CTACCCEAAA
GCGGATGGAA TCTTGGTGAA TACATGGGA GAGATGGAGC CCAAATCATT
AAAGTCCCTT CAAGACCCGA AACTTTTGGG CCGGGTCGCT CGTGTACCGG
TTTATCCGGT TGGTCCGTTA TGCAGACCGA TACAATCATC CACGACCGAT
CACCCGGTTT TTGATTGGTT AAACAAACAA CCAAACGAGT CGGTTCTCTA
CATTTCCCTC GGGAGTGGTG GTTCTCTAAC GGCTCAACAG TTAACCGAAT
TGGCGTGGGG GCTCGAGGAG AGCCAGCAAC GGTTTATATG GGTGGTTGGA
CCGCCCGTTG ACGGCTCGTC TTGCAGTGAT TATTTCTCGG CTAAAGGCGG
TGTAACCAAA GACAACACGC CAGAGTATCT ACCAGAAGGG TTCGTGACTC
GTACTTGCGA TAGAGGTTTC ATGATCCCAT CATGGGCACC GCAAGCTGAA
ATCCTAGCCC ATCAGGCCGT TGGTGGGTTT TTAACACATT GTGGTTGGAG
CTCGACGTTG GAAAGCGTCC TTTGCGGCGT TCCAATGATA GCGTGGCCGC
TTTTCGCCGA GCAGAAATAG AACGCGGCGT TGCTTAGCGA TGAAGTGGGA
ATCTCTGTTA GAGTGGATGA TCCAAAGGAG GCGATTTCTA GGTCTGAAGAT
TGAGGCGATG GTGAGGAAGG TTATGGCTGA GGACGAAGGT GAAGAGATGA
GAAGGAAAGT GAAGAAGTTG AGAGACACGG CGGAGATGTC ACTTAGTATT
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Figure 6

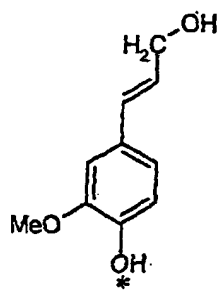
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VIKEEHTVQR KPLTIPGCEP VRFEDIMDAY LVPDEPVYHD LVRHCLAYPK
ADGILVNTWE EMEPKSLKSL QDPKLLGRVA RVPVYPVGPL CRPIQSSTD
HPVFDWLKQ PNESVLYISF GSGGSLTAQQ LTELAWGLEE SQORFIWVVR
PPVDGSSCSD YFSAKGGVTK DNTPEYLPEG FVTRTCDRGF MIPSWAPQAE
ILAHQAVGGF LTHCGWSSTL ESVLCGVPMI AWPLFAEQNM NAALLSDELG
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p-coumaryl alcohol

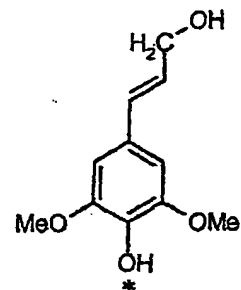


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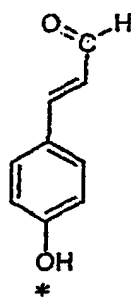
Coniferyl alcohol



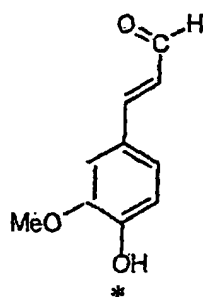
Sinapyl alcohol



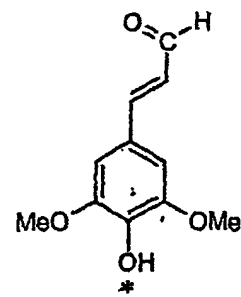
p-coumaryl aldehyde



Coniferyl aldehyde



Sinapyl aldehyde



* : position for glucosylation

Figure 7

Figure 8a

ATGAAGATTACAAAACCATGTGGCCATGTTGCTAGCCCCGGAATGGGCCACATC
ATCCCGGTGATCGAGCTCGGAAAACGCTTAGCTGGTTCCACGGCTTCGATGTCACC
ATTTTCGTCCCTTGAAACCGACGCAGCCTCAGCTCAATCTCAATTCCTTAACTCACCA
GGCTGCGACGCGGCCCTTGTTGATATCGTTGGCCTCCCAACGCCCGATATCTCCGGT
TTAGTCGACCCATCAGCCTT

Figure 8b

TGTGGTGACCAAGATCGGAGTCATTATGCGTGAAGCTGTTCCAACCCTCCGATCCAA
GATCGTTGCCATGCATCAAAACCCAACGGCTCTGATCATTGACTTGTTTGGCACAGA
TGCGTTATGTCTTGACGCGGAGTTAAACATGTTGACTTATGTCTTTATCGCTTCCAA
CGCGCGTTATCTCGGAGTTTCGATATATTATCCAACCTTGGACGAAGTTATCAAAGA
AGAGCA

Figure 8c

CACAGTGCAAAGAAACCCACTCGCTATACCGGGGTGTGAACCGGTTAGGTTCGAAGA
TACTCTGGATGCATATCTGGTTCCCGACGAACCGGTGTACCGGGATTTTGTTCGTCA
TGGTCTGGCTTACCCAAAAGCCGATGGAATTTTGGTAAATACATGGGAAGAGATGGA
GCCCAAATCATTGAAGTCCCTTCTAAACCCAAAGCTCTTGGGCCGGGTGCTCGTGT
ACCGGTCTATCCAATCGGT